

fi-590PRF Imprinter Operator's Guide

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Introduction

Thank you for purchasing the fi-590PRF Imprinter option for fi-5900C Color Image Scanner.

This guide explains how to install and use the imprinter. (For further details about the functions and operations of fi-5900C Image Scanner, refer to the “fi-5900C Image Scanner Operator’s Guide” included in fi-5900C Setup CD-ROM.)

This guide also contains other important information, such as procedures for replacement of consumables. Keep this guide in a convenient and safe place so that you can refer to it whenever necessary.

We hope this manual will be helpful in your future use of the fi-590PRF Imprinter.

Manufacturer

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References to operating systems (OS) are indicated as follows:

Windows 95:	Microsoft® Windows® 95 operating system.
Windows NT 4.0:	Microsoft® Windows NT® Server operating system version 4.0, Microsoft® Windows NT® Workstation operating system version 4.0.
Windows 98:	Microsoft® Windows® 98 operating system.
Windows Me:	Microsoft® Windows® Millennium Edition operating system.
Windows 2000:	Microsoft® Windows® 2000 Professional operating system.
Windows XP:	Microsoft® Windows® XP Professional operating system, Microsoft® Windows® XP Home Edition operating system.

Where there is no distinction between the different versions of the above operating system, the general term "Windows" is used.

Regulatory Information

FCC declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna..
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is located.
- Consult your dealer or an experienced radio/TV technician.

FCC warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Canadian DOC Regulations

This digital apparatus does not exceed the Class A limit for radio noise emissions from digital apparatus set out in the Radio interference Regulations of the Canadian Department of Communications. This Class A digital apparatus complies with Canadian ICES-003.

Le présent appareil numérique n’émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique dicté par le ministère des Communications du Canada. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Bescheinigung des Herstellers / Importeurs

Für den fi-590PRF wird folgendes bescheinigt:

- In Übereinstimmung mit den Bestimmungen der EN45014(CE) funktentstört
- Maschinenlärminformationsverordnung 3.GPSGV: Der höchste Schalldruckpegel beträgt 70 dB (A) oder weniger, gemäß EN ISO 7779.

Use in High-safety Applications

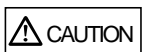
This product has been designed and manufactured on the assumption that it will be used in office, personal, domestic, regular industrial, and general-purpose applications. It has not been designed and manufactured for use in applications (simply called "high-safety applications" from here on) that directly involve danger to life and health when a high degree of safety is required, for example, in the control of nuclear reactions at nuclear power facilities, automatic flight control of aircraft, air traffic control, operation control in mass-transport systems, medical equipment for sustaining life, and missile firing control in weapons systems, and when provisionally the safety in question is not ensured. The user should use this product with adopting measures for ensuring safety in such high-safety applications. PFU LIMITED assumes no liability whatsoever for damages arising from use of this product by the user in high-safety applications, and for any claims or compensation for damages by the user or a third party.

Conventions

Warning Indications Used In This Manual



This indication alerts operators to an operation that, if not strictly observed, may result in severe injury or death.



This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.

Symbols Used In This Manual

This manual uses the following symbols in addition to warning indications



This symbol alerts operators to particularly important information. Be sure to read this information first before proceeding.



This symbol alerts the operator to useful advice on operating the device.



The triangle indicates that special care and attention is required.

A drawing inside the triangle shows what specific caution.



A circle with a slanted line through it indicates an action or step that should not be performed.



Outline characters on a colored background show instructions that users should follow.

It may also include the drawing of the specific instruction.

Screen Examples In This Manual

The screen examples in this manual are subject to change without notice in the interest of product improvement.

If your displayed screen differs from the screen examples in this manual, operate by following your actual displayed screen while referring to the User's Manual of the scanner application you are using.

The screenshots used in this manual are for Windows, FUJITSU TWAIN 32 Scanner Driver.













About Maintenance

The user must not perform repairs on this product. Contact the store where you purchased the scanner or an authorized FUJITSU Image Scanner service provider to have repairs made on this product.

Safety Precautions













FOLLOW THESE INSTRUCTIONS AND BE SURE TO HEED ALL WARNINGS AND CAUTIONS DESCRIBED BELOW.

WARNING

	Do not touch the power plug with wet hands, since doing so can cause electric shocks.
	
	A damaged AC cable can cause fire or electric shock. Do not place heavy objects on AC cables, or pull, bend, twist, heat, damage or modify AC cables. Do not use damaged AC cables or power plugs. Do not install AC cables or power plugs in loose wall sockets.
	Do not use cables other than the ones supplied with this product. Use only specified AC cables and connector cables. Failure to use the correct cables might cause electric shock and/or equipment failure.
	Use this scanner only at the indicated power voltage and current. Improper power voltage and current might cause fire, electric shock and/or equipment failure. Do not connect to multiple-power strips.
	Wipe off any dust from metal parts on the power plug or metal fittings with a soft, dry cloth. Accumulated dust might cause fire or electric shock.
	Do not install the scanner in locations subject to oil smoke, steam, humidity, and dust. Doing so might cause a fire or electric shock.
	If you detect heat coming from the device or detect other problems such as smoke, strange smells or noises, immediately turn off the scanner and then disconnect its power plug. Make sure that the smoke has stopped and, then contact the store where you bought the scanner or an authorized FUJITSU scanner service provider.
	If the scanner is damaged for any reason, turn off the scanner and unplug the power cable before contacting the store where you purchased the scanner.
	Do not insert or drop metal objects into the scanner. Do not scan wet documents or documents with paper clips or staples. Do not splash liquids on or allow the scanner to get wet.
	If foreign objects (water, small metal objects, liquids, etc.) get inside the scanner, immediately turn off the scanner and disconnect the power plug from the power outlet, then contact the store where you bought the scanner or the Maintenance Service Center. Pay particular attention to this warning in households where there are small children.
	Do not take apart or modify the scanner. The inside of the scanner contains high-voltage components. Touching these components might cause fire or electric shock.

CAUTION

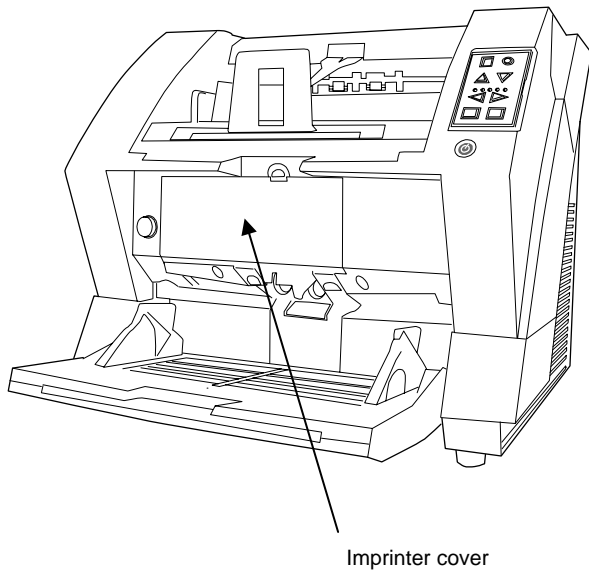
The following describes important cautions.

	Make sure that the scanner is installed on a flat, level surface and that none of its parts extend beyond the surface top, such as a desk or table.
	Do not install the scanner on unstable surfaces. Install the scanner on a leveled surface that is free of vibration to prevent it from falling. Install the scanner on a strong surface that will support the weight of the scanner and other devices.
	Firmly insert the power plug as far it can go into the power outlet.
	Install the scanner away from strong magnetic fields and other sources of electronic noise. Also, protect the scanner from static electricity as this might cause the scanner to malfunction.
	Do not use aerosol sprays to clean the scanner. Aerosol sprays cause dirt and dust to enter the scanner resulting in scanner failure and malfunction.
	When the scanner will not be used for a long period, for safety precautions, be sure to disconnect the power plug from the power outlet.
	Do not place the scanner in direct sunlight or near a heating apparatus, as excessive heat can build up inside the scanner and cause fire or scanner-related troubles. Install the scanner in a well-ventilated location.
	Do not block the ventilation ports. Blocking the ventilation ports generates heat inside of scanner, which may result in fire or scanning failure.
	Do not place heavy objects on the scanner or use the scanner's surface top to perform other work. Improper installation might cause injuries and equipment failure.
	Do not move the scanner with the power and interface cables connected as this can damage the cables, which can later cause fire, electric shock as well as injury. Before moving the scanner, be sure to disconnect the power plug from the power outlet, and all other data cables. Make sure that the floor is free of any obstructions.
	Avoid touching any scanner mechanism when the scanner is turned on or during scanning since this may cause injuries.
	Do not use the device immediately after moving it from a cold place to a warm room. This may cause condensation, which might lead to scanning errors. Let the device dry about one or two hours before you use it.

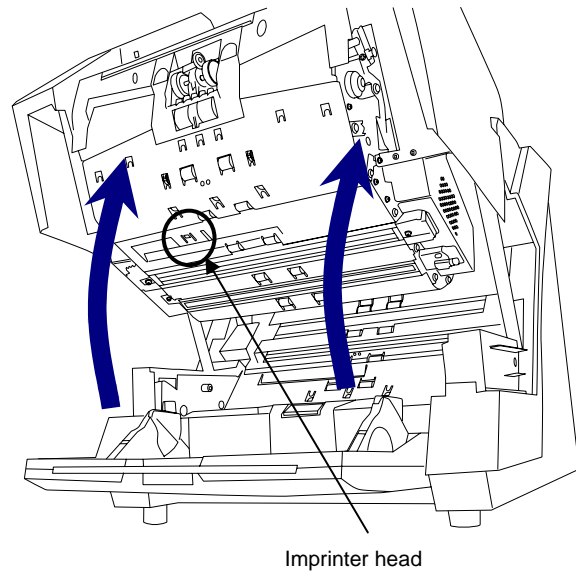
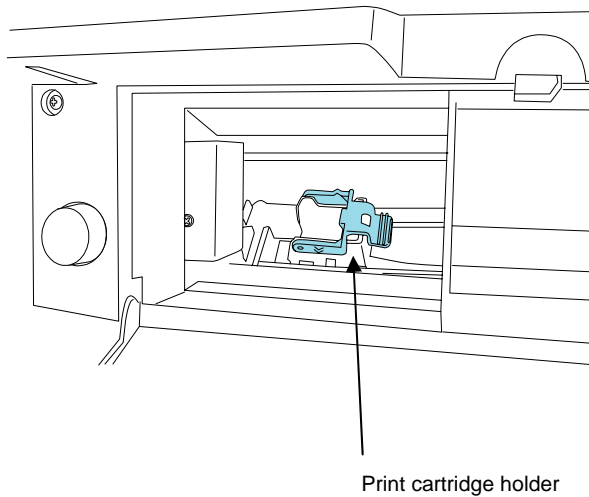
1. Preparations

1.1 Names of Component Parts

Open the Imprinter cover to see Imprinter (fi-590PRF) which is installed in the scanner (fi-5900C).



<Inside of Imprinter Cover>



2. Basic Operations

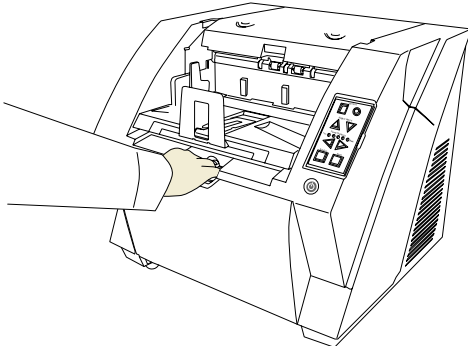
2.1 Installing the Print Cartridge

Mount the print cartridge as follows:

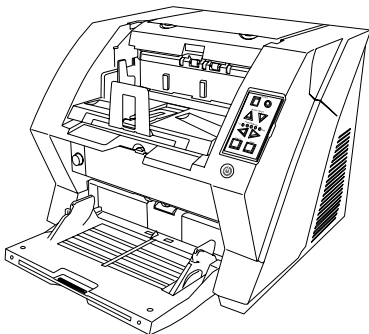
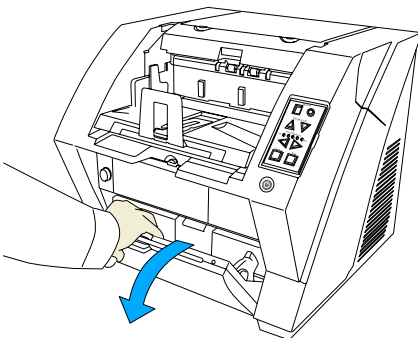


When installing or replacing the print cartridge, be careful not to insert it out of place.

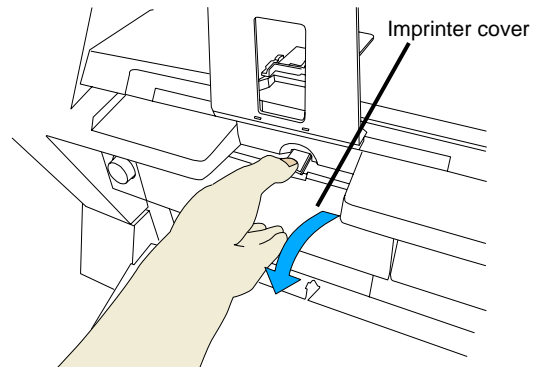
1. Confirm that the scanner is turned off.
2. Hold the blue part located on the center of the hopper.



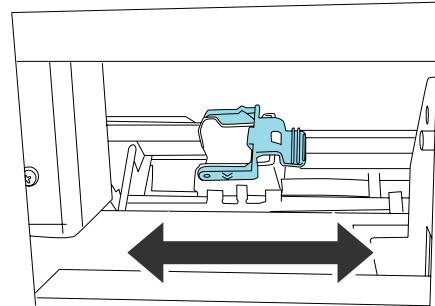
3. Flip down the hopper gently.



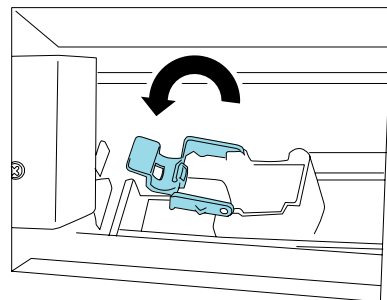
4. Open the imprinter cover.



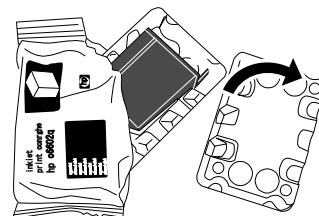
5. Move the Print cartridge holder to where the cartridge can be inserted easily.



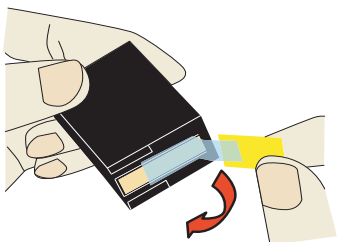
6. Turn the blue lever toward left and open the cartridge holder.



7. Remove the new print cartridge from its pouch.

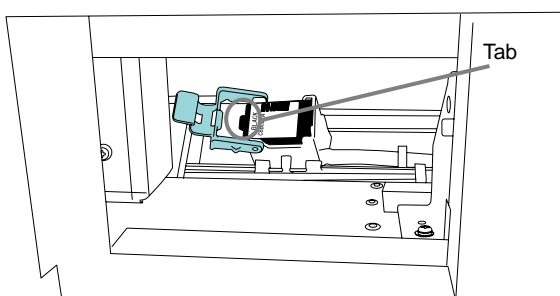


- Remove protection tape from the print cartridge.

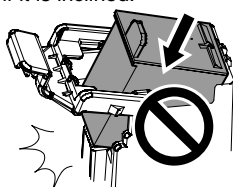


Do not touch the metal part of the cartridge nor put the tape back again.

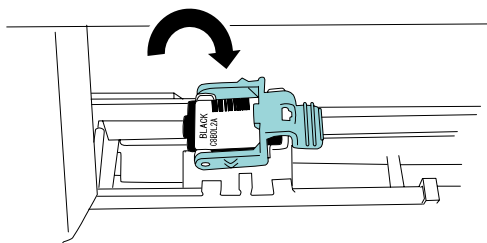
- When the lever is closed, rotate the lever toward left to open before placing the print cartridge.



- Insert the cartridge with its Tab positioned toward left side and install it.
- Note that the cartridge cannot be inserted properly if it is inclined.



- Turn the lever on the print cartridge toward right to fix it.



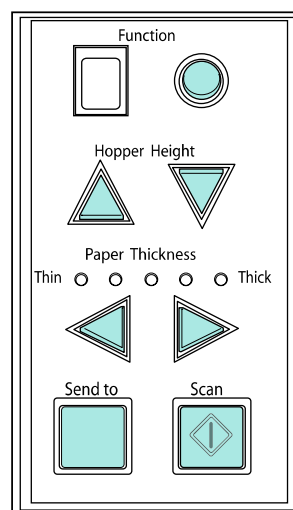
- Close the imprinter cover.

2.2 Operating Test

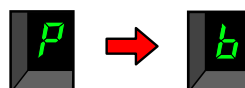
After installing the imprinter, test to see if printing can be performed on the Offline Print Test mode.

- While pressing the [Hopper Height] button (\triangle or ∇) on the operator panel, switch on the scanner.

Continue pressing on the [Hopper Height] button.



- Release the [Hopper Height] button when the Function Number Display changes from [P] to [b].



- Place a blank document on the Hopper.



- Use A4 or Letter size paper. If the size is smaller than A4 or Letter, printing may not successfully complete.
- Confirm that the Print Cartridge is positioned within the document width.

- Press [Scan] button to test.

⇒ Paper will feed into the Hopper, and the Imprinter will print out the Print Test Characters starting at 5mm (± 4 mm) from the paper's edge.



Print test patterns

Test pattern 1 (Horizontal):

ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`00000000

Test pattern 2 (Horizontal):

abcdefghijklmnopqrstuvwxyz{|}~ 00000000

Test pattern 3 (Horizontal):

!"#\$%&'()*+,-./0123456789:;<=>?@00000000

Test pattern 4 (Vertical):

ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`00000000

Test pattern 5 (Vertical):

abcdefghijklmnopqrstuvwxyz{|}~ 00000000

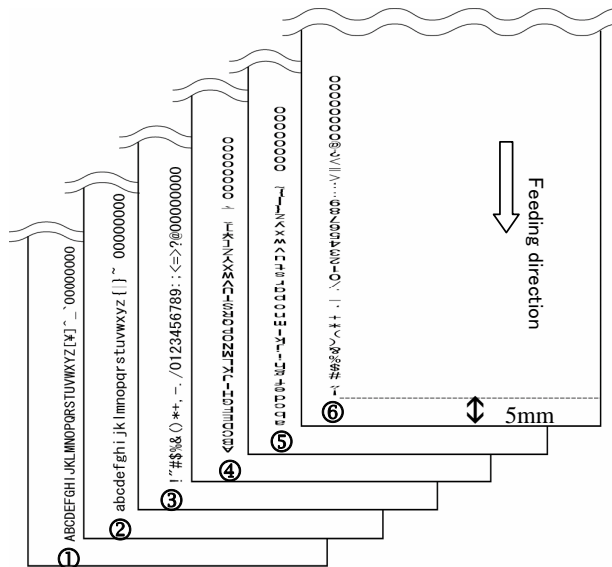
Test pattern 6 (Vertical):

!"#\$%&'()*+,-./0123456789:;<=>?@00000000

When multiple sheets of documents are placed in the Hopper, the Test Print repeats patterns from 1 through 6.

The numbering data portion "00000000" changes from 0 (Zero) with increment of 1(one).

(One test pattern is printed at a time. Press the [Scan] button to continue printing the next test pattern.)



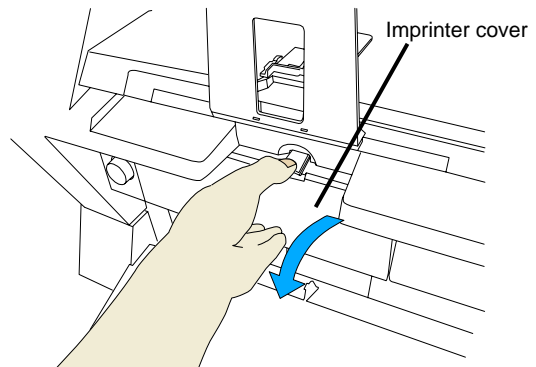
Test pattern print sample

5. To stop Offline Print test mode, turn off the Scanner.

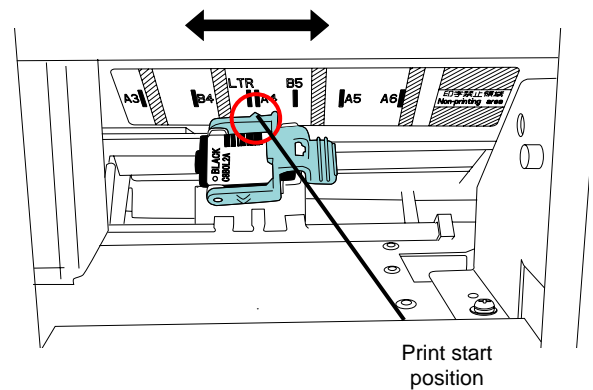
2.3 Positioning the Print Cartridge

To Position the print cartridge for printing:

1. Open the imprinter cover.



2. Place the print alignment mark to the position where you want to print.

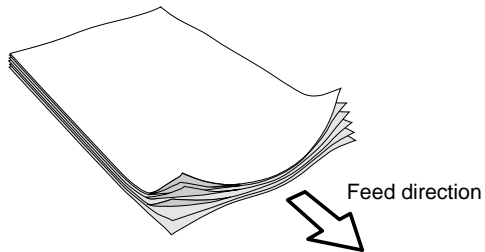


- The small "▲" protruding from the side of the print cartridge holder indicates the print start position on the page.
- Above the print cartridge tray are document paper size markings; please use them to adjust for printing positions.
- Do not set the print cartridge within the printing prohibited area; otherwise, the document may stain with ink.
- Put the actual document in the Hopper and confirm that the print cartridge is positioned within the document's width.

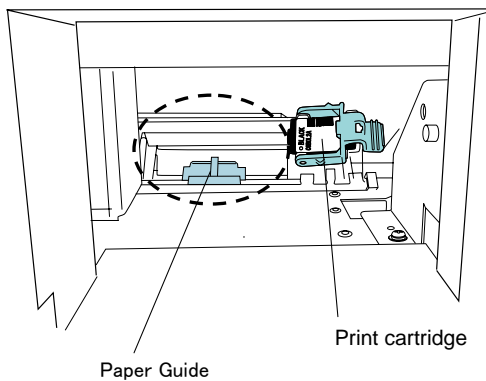
3. Close the imprinter cover.

2.4 How to Use the Paper Guide

Use the Paper Guide to prevent paper jams due to curling of the edges, as shown below.

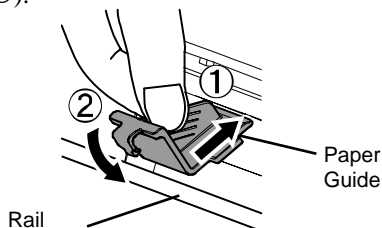


Set the print cartridge to the right side and place the Paper Guide in the left area as shown in the illustration below.



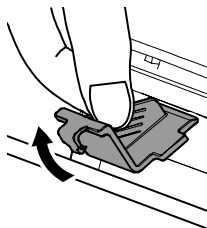
To Attach the Paper Guide

As shown in the illustration below, place the Paper Guide on the rail (①), and push the guide's hook to engage it on to the rail (②).



To Remove the Paper Guide

As shown below, hold the Paper Guide and pull upward to unhook it.



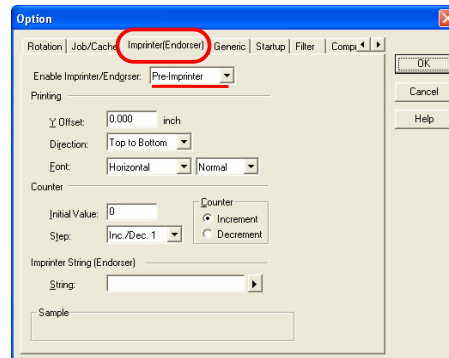
2.5 Print Setup

You can configure settings for the imprinter by using the scanner driver dialog box.

FUJITSU TWAIN driver (Example)

Click [Option] button.

In [Option] dialog box, choose [Imprinter (Endorser)] tab and specify the Imprinter settings.



Available items are:

- Y offset (Printing)
- Font orientation(vertical, horizontal)/ width (normal/bold/narrow)
- Strings definition (Max. 40 characters)
- Counter Setup (column, add/subtract, step)

For the details, please refer to "FUJITSU TWAIN 32 Scanner Driver User's Guide" or "TWAIN Driver Help"

2.6 Replacing the Print Cartridge



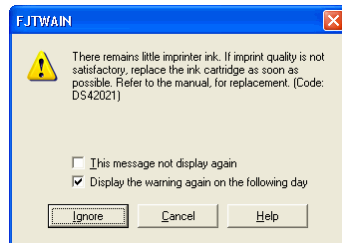
Make sure that you turn off the scanner power and unplug the power cable from the outlet.

If the cartridge replacement is done with power turned on, it may cause electric shock or imprinter failure.

Replace the Print Cartridge as follows:

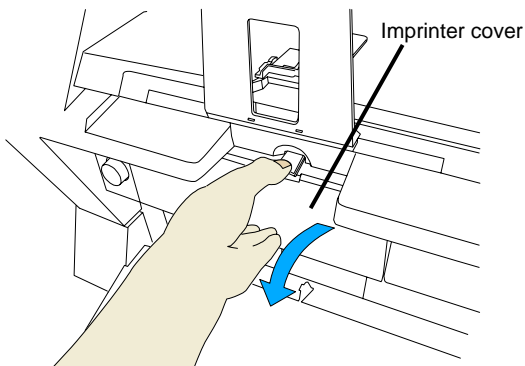


- When the following message appears, replace the Print Cartridge as soon as possible.

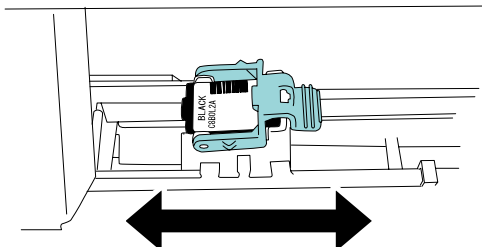


- If you continue to print without replacing the cartridge, your print output will continue to appear lighter and lighter.
- When installing or replacing the print cartridge, be careful not to insert it out of place.

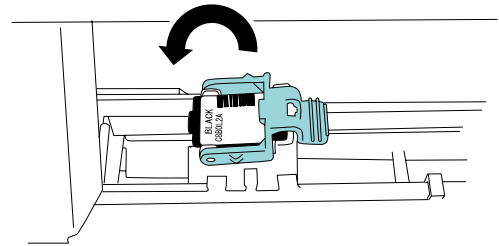
- Turn off the Scanner.
- Open the imprinter cover.



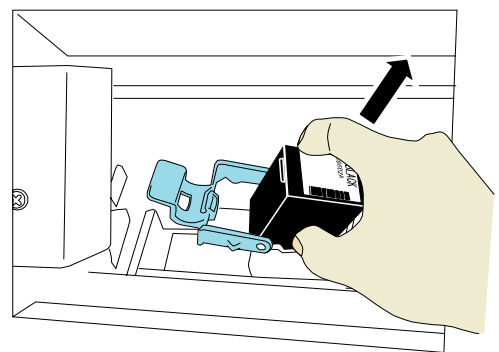
- Move the Print cartridge holder to where the cartridge can be removed easily.



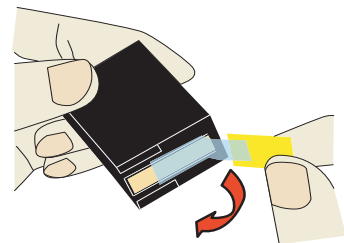
- Turn the blue lever toward left and open the cartridge holder.



- Take out the Print cartridge from the holder.

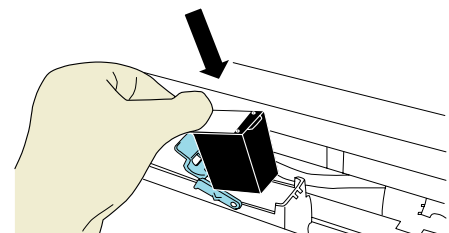


- Take the new Print Cartridge out of its pouch and detach the protection tape from the Print Cartridge.



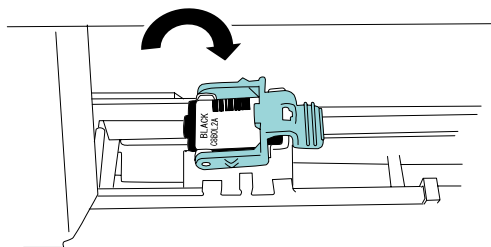
Do not touch the metal part of the cartridge nor put the tape back again.

- Insert the Print Cartridge.



- Insert the cartridge with its Tab positioned toward left side and install it.
- Be careful not to let the print cartridge touch or catch on to the print circuit film.

8. Turn the lever on the print cartridge toward right to fix it.

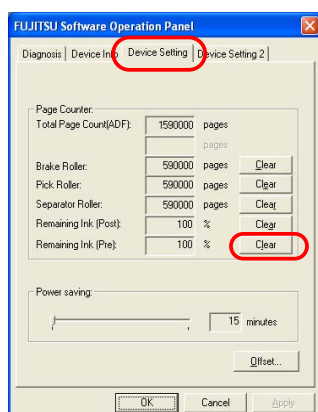


9. Close the imprinter cover.
10. Reset the Ink Remain Counter.



You must reset the Ink Remain Counter whenever you replace the print cartridge.

- ① On the [Start] menu, select [Programs]-[Scanner Utility for Microsoft Windows]-[Software Operation Panel].
② Select the [Device Setting] tab.



- ③ Click the [Clear] button at the [Remaining Ink (Pre)] button.

⇒ The Ink remain counter will reset to 100%.

3. Daily Care

3.1 Cleaning the Print Cartridge

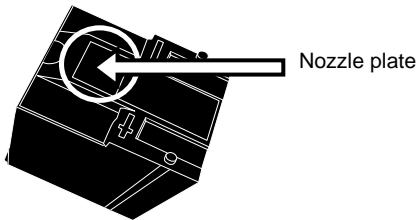
Poor quality prints can occur due to blocked ink emission holes in the nozzle. Leaving the imprinter unused for long periods can also cause emission holes to become blocked. When the emission holes are blocked, clean the nozzle surface of the print cartridge.



For cleaning, use a dry lint-free cloth (DO NOT use tissue), and gently wipe any dirt and stains off the nozzle's surface.

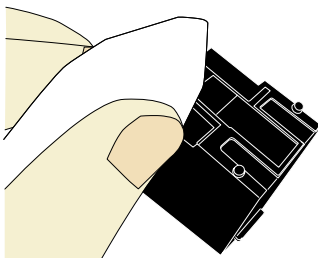
1. Turn off the Scanner.
2. Remove the Print Cartridge.

(Refer to "2.6 Replacing the Print Cartridge")



When cleaning, be careful not to touch the nozzle plate or the contact parts of the cartridge directly by hand.

3. Gently wipe any dirt and stains off the nozzle surface.



4. Make sure that all dirt and stains are removed, before installing the Print Cartridge.

(Refer to "2.6 Replacing the Print Cartridge")



When installing or replacing the print cartridge, be careful not to insert it out of place.

3.2 Cleaning the Imprinter

As the fi-590PRF prints the number on a document before reading operation, ink can spatter over the glass and paper path of the Upper transport unit, and vicinity of the print cartridge holder.

We recommend you to clean the scanner after 5000 sheets scanning to avoid smudge on the scanned image. Note that the required cleaning cycle may vary depending upon document type to be scanned.

More frequent cleaning may be required when printing a document on which ink does not easily get dry.



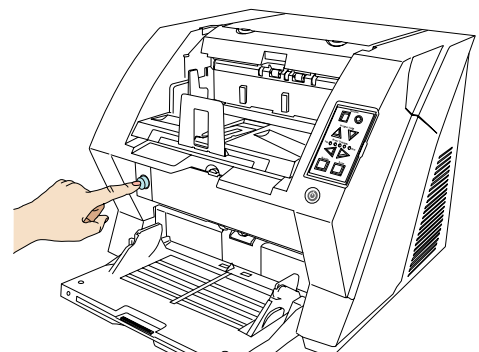
When you do the cleaning, turn off the scanner power, and unplug the power cable from the outlet.

If cleaning is done with power turned on, it may cause electric shock or imprinter failure.

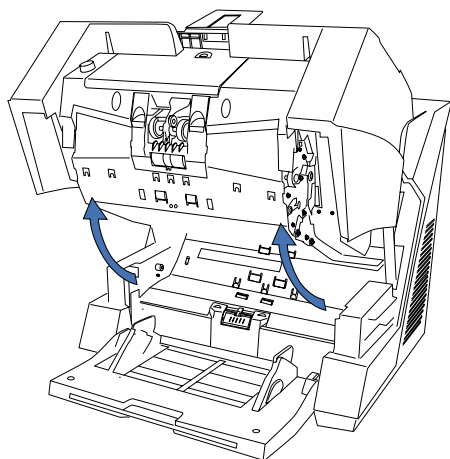


For cleaning, use a dry lint-free cloth (DO NOT use tissue).

1. Turn off the Scanner.
2. Remove the print cartridge.
(Refer to "2.6 Replacing the Print Cartridge")
3. Press the ADF cover open button.



⇒The cover is slowly opened.

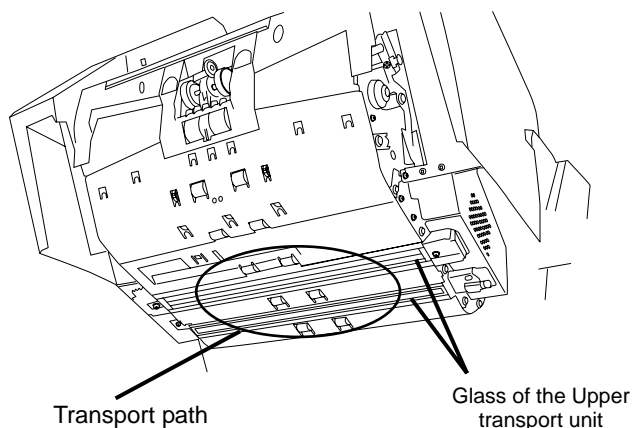


4. Wipe the following parts using a cloth moistened with Cleaner F1 or isopropyl alcohol.

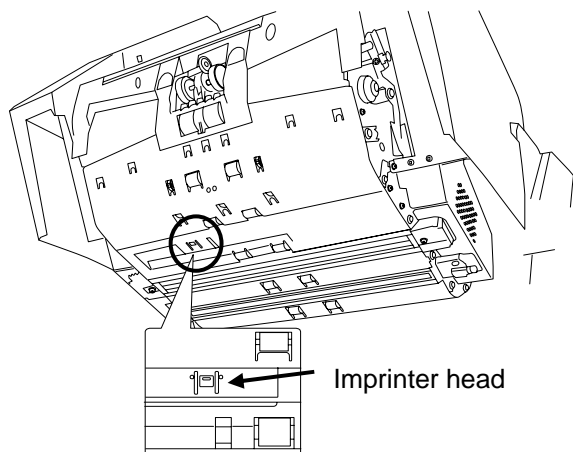


For details on cleaning the scanner, refer to "fi-5900C Operator's Guide".

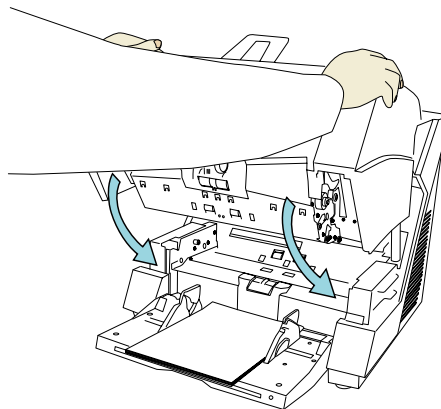
Glasses of Upper transport unit and Transport path



Bottom of the print cartridge



5. Reinstall the print cartridge.
6. Hold the ADF cover with both hands and press it down slowly.



Press the ADF cover until it is fixed.



When closing the ADF, be sure nothing is left inside of the ADF.

Be careful not to pinch your fingers.

4. Error Messages

The following numbers or letters on the Function Number Display indicates a malfunction in the imprinter.



Description: The Imprinter cover or ADF cover is open.

How to solve: Close the Imprinter cover or ADF cover firmly.



Description: The print cartridge is not installed.

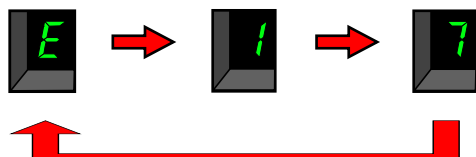
How to solve: Open the Imprinter cover and confirm that the print cartridge is installed correctly.



Description: A problem occurred to the Imprinter.

How to solve: ①Open the Imprinter cover and confirm that the print cartridge has been installed correctly.

②Turn off the scanner and then turn it on again.
(If the problem occurs again, contact the store where you purchased the imprinter or contact an authorized FUJITSU scanner service provider.)




Description: The imprinter fuse has blown out.

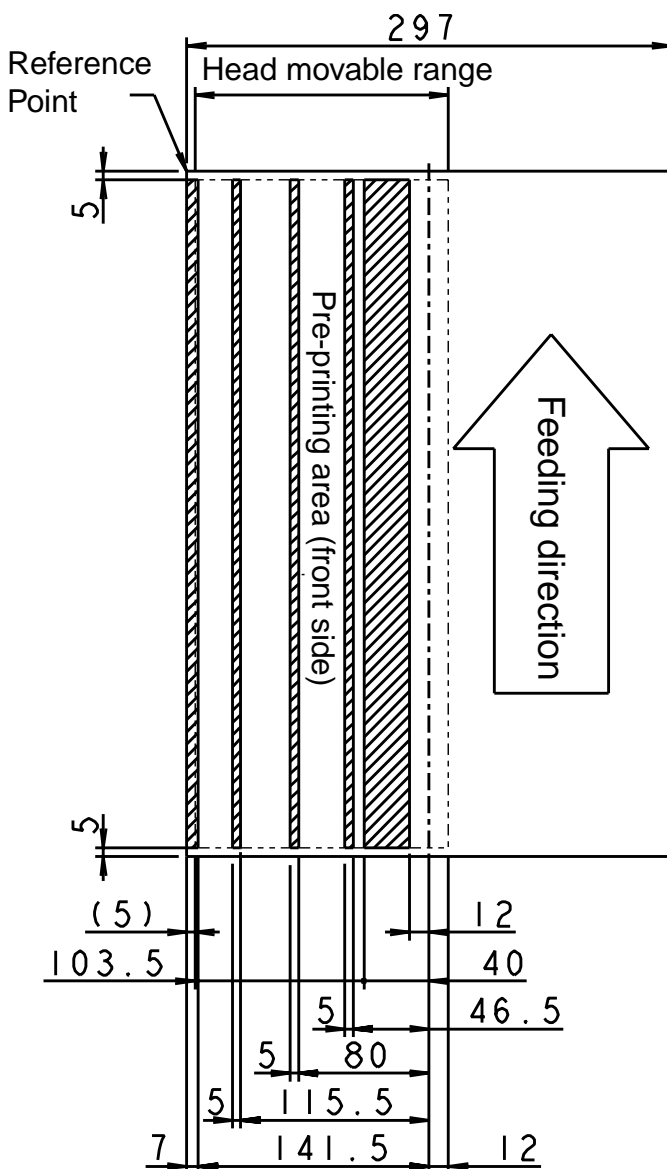
How to solve: Contact the store where you purchased the scanner, or contact an authorized FUJITSU scanner service provider.



For other errors, refer to "fi-5900C Image Scanner Operator's Guide" included in fi-5900C Setup CD-ROM.

5. Specifications

Item	Specification			
Printing Method	Thermal inkjet printing			
Print Timing	Pre printing (front side)			
Printing Characters	Alphabet : A to Z, a to z Numeric Characters : 0, 1 to9 Symbols : ! " \$ # % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { } ~			
Maximum number of characters per line	40 characters (When using 8 digits counter: 43 characters)			
Print orientation	Normal: 0°, 180° (horizontal orientation), 90°, 270° (vertical orientation) Narrow: 0°, 180° (horizontal orientation),			
Character size	Normal: Height 2.91mm × width 3.03mm / 0.1146 × 0.1193 in (horizontal orientation) Height 3.03mm × width 2.91mm / 0.1193 × 0.1146 in (vertical orientation) Narrow: Height 2.91mm × width 1.71mm / 0.1146 × 0.0673 in (horizontal orientation)			
Character pitch	3.79mm / 0.1492in (Normal), 2.46mm /0.0968in (Narrow)			
Font style	Regular, Bold			
Character width	Normal, Narrow			
	Character width	Print orientation	Font style	Printing
	Normal	Horizontal	Regular	Available
			Bold	Available
		Vertical	Regular	Available
			Bold	Available
	Narrow	Horizontal	Regular	Available
			Bold	NOT Available
		Vertical	Regular	NOT Available
			Bold	NOT Available
	Document that can be scanned	Documents supported by fi-5900C For the details, please refer to “fi-5900C Image Scanner Operator’s Guide”-“Chapter 7 Document Specification.”		
<div><div><div>ATTENTION</div></div><div>Documents with glossy surface such as thermal paper, thermal transfer paper, coated paper, and art paper take longer time for the ink to dry and may cause poor print quality. The imprinter must be cleaned more frequently if you use these types of papers.</div></div>				

Item	Specification
Printing area	 <p>Unit: mm</p> <p>* The document stains with ink when printing in the shaded areas (shown in the illustration). Therefore, correct printing operations in such areas are not guaranteed.</p>
Character position accuracy	Vertical: ±4mm (at reference position) Horizontal: ±4mm (at reference position)
Ambient condition	Temperature: 10 to 35°C (50 to 95°F), Humidity: 20 to 80%
Consumable	Print Cartridge (P/N: CA00050-0262) Replacement Cycle : 4,000,000 characters (The number of characters may decrease depending on the font selection.)